

Application No. 10/784,299

Amendments to the Specification:

Please amend paragraphs 6, 14, 18, and 19 of the specification as indicated below.

[0006] The dual stage inflator in the present invention has three contemplated firing scenarios: single stage output, delayed output, and full output. In single stage output only the gas generant in the primary chamber is lit. In the delayed output scenario, the gas generant in the first chamber is igniter ignited, and after a predetermined amount of time, the gas generant in the secondary chamber is ignited. In full output, the gas generant in both chambers is ignited simultaneously.

[0014] FIG. 4A is a-an enlarged view of the divider plate resting against the lower housing. The second filter is not represented in this FIG. for clarity purposes.

[0018] The igniter is in electrical communication with an electronic control unit (not shown) in a vehicle. The igniter has two electrodes 12 insulated from one another. The electrodes 12 have a bridge wire connecting the two electrodes 12, and the bridge wire is embedded in multiple layers of ignition material such as zirconium potassium perchlorate. The bridge wire has resistance and as current flows through the bridge wire, the bridge wire generates sufficient heat to ignite the ignition material. The electronic control unit receives electrical signals from one or more crash sensors and vehicle occupant sensors. Once the electronic control until-unit determines a crash is imminent or is occurring, the electronic control unit transmits a firing signal to the igniter, resulting in the firing of the igniter or lighting of the ignition material therein. It is understood that any suitable igniter may be used in the inflator 10 according to the present invention including an igniter employing a semiconductor bridge or any other suitable heating source in place of the bridge wire.

Application No. 10/784,299

[0019] As discussed earlier, the first igniter 11 is retained in the first igniter retainer 14. With reference to FIG. 1, a disk 23 is crimped to the first igniter retainer 14. The disk 23 has a plurality of holes 24 therethrough. Enhancer pellets 15 are loaded in the space formed by the disk 23, the first igniter retainer 14, and the first igniter 11. Alternatively, an annular enhance-enhancer pellet may be utilized. The enhancer pellets 15 rapidly burn to yield hot combustion gases that ignite the gas generant 20. The combustion gases produced from the burning of the enhancer pellets 15 travel through the holes 24 into the primary chamber 22. The first igniter retainer 14 is secured to the lower housing 54 by welding or other suitable means, and a silicone washer 25 is employed to create an en-effective gas seal for the first igniter 11.